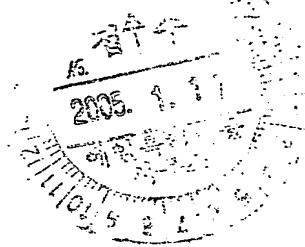


PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)



| | | | |
|---|--|--|---|
| Applicant's or agent's file reference YL04023PCT | FOR FURTHER ACTION | | see Form PCT/ISA/220 as well as, where applicable, item 5 below. |
| International application No. PCT/KR2004/002993 | International filing date (day/month/year) 18 NOVEMBER 2004 (18.11.2004) | (Earliest) Priority Date (day/month/year) 10 DECEMBER 2003 (10.12.2003) | |
| Applicant CJ CORP. et al | | | |

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box No. II)

3. **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

as suggested by the applicant.

because the applicant failed to suggest a figure.

because this figure better characterizes the invention.

b. none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2004/002993

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 C12N 1/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 C12N 1/20

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS, Delphion, PubMed, 'Corynebacterium', '5'-xanthyllic acid', '5-fluorotryptophan'

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| A | EP 0350970 A1 (KYOWA HAKKO KOGYO CO., LTD.), 24 Feb. 1984. See the whole document. | 1-3 |
| A | EP 1029926 A1 (KYOWA HAKKO KOGYO CO., LTD.), 08 Feb. 2000. See the whole document. | 1-3 |
| A | KR 02-57470 A (C.J. CORP.), 11 Jul. 2002. See the whole document. | 1-3 |
| A | KR 01-89980 A (C.J. CORP.), 01 Oct. 2001. See the whole document. | 1-3 |

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

07 JANUARY 2005 (07.01.2005)

Date of mailing of the international search report

12 JANUARY 2005 (12.01.2005)

Name and mailing address of the ISA/KR


 Korean Intellectual Property Office
 920 Dunsan-dong, Seo-gu, Daejeon 302-701,
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2004/002993

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|--|---|
| EP 0350970 A1 | 24 Feb 1984 | JP 59154995 A2 EP 0117740 A2 US 4729952 | 04 Sep 1984 05 Sep 1984 08 Mar 1988 |
| EP 1029926 A1 | 08 Feb 2000 | JP 2000295996 A2 US 20020192746 A1 CA 2297613 AA | 24 Oct 2000 19 Dec 2002 08 Aug 2000 |
| KR 02-57470 A | 11 Jul 2002 | none | |
| KR 01-89980 A | 01 Oct 2001 | none | |